

REMARKS

Claims 1-29 are pending in this application. By this Amendment, claims 1, 11, 12, 15-20 and 27-29 are amended. Support for the amendments to claims 1, 11, 12, 15-20 and 27-29 can be found in the specification, for example, at paragraphs [0013] and [0014]. No new matter is added.

I. Notice of References Cited Section

Applicants respectfully request that Hollerer et al., "Exploring MARS: developing indoor and outdoor user interfaces to a mobile augmented reality system," 1999: Comp & Graph 23, 779-785 be listed in the *Notice of References Cited* Section in the next Patent Office communication.

II. The Claims Define Patentable Subject Matter

A. §103(a) Rejection of Claims 1-7 and 9-26 Over Glorikian and Giniger

Claims 1-7 and 9-26 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,343,317 to Glorikian in view of U.S. Patent No. 6,199,045 to Giniger et al. and U.S. Patent Application Publication No. 2002/0111188 to Harma et al. and further in view of U.S. Patent No. 6,433,818 to Steinberg et al. The rejection is respectfully traversed.

Glorikian, Giniger, Harma and Steinberg, alone or in a permissible combination, do not teach or suggest the features of independent claims 1, 11, 12 and 15-20. None of the applied references teaches or suggests "the shape of the virtual object including a cube or a sphere," as recited in independent claim 1, and as similarly recited in independent claims 11, 12 and 15-20 (emphasis added).

Glorikian merely provides service based on the position of the mobile member within the exhibits (Glorikian, col. 7, line 43 - col. 8, line 10 and Fig. 3). Glorikian merely stores the location of exhibits as points in a Cartesian reference system (col. 7, lines 43-58). Glorikian does not define a virtual object as a sphere or a cube, as recited in the independent claims.

Further, Giniger, Harma and Steinberg do not remedy the deficiencies. Giniger is merely cited by the Office Action for its alleged teaching of perishable information and Harma is merely cited by the Office Action for its alleged teaching of a camera. Furthermore, Steinberg merely discloses that a camera is inoperable if removed from an authorized zone of operation, i.e., the signal from the transmitter is not received (Steinberg, col. 4, lines 45-57).

Thus, for at least these reasons, independent claims 1, 11, 12 and 15-20 are patentable over Glorikian, Giniger, Harma and Steinberg. Further, claims 2-7, 9, 10, 13, 14 and 21-26, which variously depend from the independent claims, are also patentable over Glorikian, Giniger, Harma and Steinberg for at least the reasons discussed above, as well as for they additional features they recite. Withdrawal of the rejection is thus respectfully requested.

B. 103(a) Rejection of Claim 8 Over Glorikian, Giniger and Stewart

Claim 8 is rejected under 35 U.S.C. §103(a) over Glorikian in view of Giniger, Harma and Steinberg, and further in view of U.S. Patent No. 6,326,918 to Stewart. The rejection is respectfully traversed.

Glorikian, Giniger, Harma, Steinberg and Stewart, alone or in a permissible combination, do not teach or suggest the features of claim 8. Stewart does not remedy the deficiencies of Glorikian, Giniger, Harma and Steinberg discussed above with respect to claim independent 1. Stewart is merely cited by the Office Action for its alleged teaching of "providing service information." Claim 8 depends from claim 1. Thus, claim 8 is patentable over Glorikian, Giniger, Harma, Steinberg and Stewart for at least the reasons discussed with respect to claim 1, as well as for the additional features it recites. Withdrawal of the rejection is thus respectfully requested.

C. §103(a) Rejection of Claims 27-29 Over Glorkian and Ruffner

Claims 27-29 are rejected under 35 U.S.C. §103(a) over Glorikian in view of Hollerer et al., "Exploring MARS: developing indoor and outdoor user interfaces to a mobile

augmented reality system," 1999: Comp & Graph 23, 779-785, and U.S. Patent No. 6,235,358 to Durst et al. The rejection is respectfully traversed.

Glorikian, Hollerer and Durst, alone or in a permissible combination, do not teach or suggest the features of independent claims 27-29. None of the applied references teaches or suggests "the shape of the virtual object including a cube or a sphere," as recited in independent claim 27, and as similarly recited in independent claims 28 and 29 (emphasis added).

As discussed above, Glorikian merely provides service based on the position of the mobile member within the exhibits, which are stored as points in a Cartesian reference system (Glorikian, col. 7, line 43-col. 8, line 10 and Fig. 3).

Further, Hollerer and Durst do not remedy the above-described deficiencies of Glorikian. Hollerer is cited by the Office Action for its alleged teaching of an input device. Durst is cited by the Office Action for its alleged teaching of generation, update and deletion of object information for virtual object.

Furthermore, none of the applied references teaches or suggests "when it is determined according to the object information stored in the storage device that the positional relationship between the mobile input device and the specified space satisfies a predetermined condition, the object-information processing device performing at least one of generation, deletion and update of the at least one of the object information and the service information according to the content of the mobile input performed by the mobile input device," as recited in independent claim 27, and as similarly recited in independent claims 28 and 29 (emphasis added).

As acknowledged by the Office Action, Glorikian does not teach this feature. Further, neither Holler nor Durst discloses this feature. Hollerer merely discloses using a desktop or projection display U1 to create virtual objects and annotate real objects for users to see (pages

779-780). Further, Durst merely discloses limiting the operation of an object locator 42, which functions as a paging transceiver, to certain external conditions when the object locator is outside a perimeter (Durst, col. 6, line 46 - col. 7, line 15). Thus, none of the applied references disclose performing generation, deletion and update of the at least of the object information and the service information "when it is determined according to the object information stored in the storage device that the positional relationship between the mobile input device and the specified space satisfies a predetermined condition," as recited in the independent claims.

Thus, for at least these reasons, independent claims 27-29 are patentable over Glorikian, Hollerer and Durst. Withdrawal of the rejection is thus respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Request for Continued Examination

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